Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (previously presented) A method of fabricating a light duct, said method comprising the steps of:

fabricating a light duct of thermoplastic material, the duct having a light relay constituted by a rectangular section bar for conveying light along its longitudinal axis referred to as a "first" axis, and provided at one of its ends both with a wall that is inclined relative to said first axis, and with a lens, the axis of revolution of the lens being contained in a longitudinal plane of symmetry, said duct presenting a given maximum height H_{max} beyond the thickness of the lens and a given mean length L_{moy} along its longitudinal axis, wherein the duct is made as a single piece by injection molding, said thermoplastic material in a mold presenting a cavity of shape identical to that of the duct :

injecting through a feed orifice disposed on one side of said cavity over a face that is substantially parallel to the plane defined by said axes, wherein said feed orifice presents a height h lying in the range 0.2 H_{max} and H_{max}, and a length ℓ lying in the range 0.2 L_{moy} and 0.8 L_{moy} : and

injecting the thermoplastic material at a rate lying in the range 400 mm^3/s to 1500 mm^3/s.

2. (previously presented) A method according to claim 1, wherein said height $\underline{h}$ of said feed orifice is equal to 0.8 H_{max} and said length l of said feed orifice is equal to 0.8 l_{moy}.

3. (previously presented) A method according to claim 1, wherein said rate is equal to 725 mm^3/s.

4. (previously presented) A method according to claim 1, wherein said mold is maintained at a temperature regulated in the range 70°C to 90°C.

5. (previously presented) A method according to claim 1, wherein said mold includes a lateral overflow orifice symmetrical to said feed orifice relative to the plane defined by said axes.

6. (previously presented) A method according to claim 1, wherein said mold is extended by a first auxiliary mold portion of substantially rectangular section and of outlet corresponding to said feed orifice.

7. (previously presented) A method according to claims 5, wherein said mold is extended by an overflow second auxiliary mold portion of substantially rectangular section, and of inlet corresponding to said lateral overflow orifice.

8. (previously presented) A method according to claim 1. further including compacting and holding step applied to the injected material.

9. (previously presented) A method according to claim 8. wherein said compacting and holding step is performed in stages.

10. (previously presented) A method according to claim 1. wherein said thermoplastic material is a cyclo-olefin polymer.

11. (previously presented) A method according to claim 1. wherein said thermoplastic material is PMMA.

12. (previously presented) A method according to claim 11. wherein the PMMA is injected at a temperature of about 220°C and at a rate of substantially 725 mm^3/s. and is then compacted at 58 MPa.

13. (previously presented) A method according to claim 12. wherein the PMMA is compacted after injection at 43 MPa for 1 s; then at 46 MPa for 2 s. then at 50 MPa for 3 s. and finally at 58 MPa for 40 s. and its cooling time in the mold is then 150 s.

14. (cancelled)